

APPLICANT(S): SHAHAR, Arie et al.
 SERIAL NO.: 10/826,363
 FILED: April 19, 2004
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AMENDMENTS TO THE SPECIFICATION

Please replace the paragraphs beginning and ending on page 1, under the heading "CROSS-REFERENCE TO RELATED APPLICATIONS", with the following:

-- The present invention claims the benefit of U.S. Provisional Patent Application Serial No. 60/464,351 (now expired), filed April 22, 2003, entitled "All Optical Chopping for Shaping and Reshaping Apparatus and Method".

In addition, this application is a Continuation-In-Part of US Patent Applications Serial Numbers 10/640,035; 10/640,018; 10/640,017 and 10/640,040 (now US Patent No. 6,956,998) filed August 14, 2003, entitled "All Optical Decoding Systems For Decoding Optical Encoded Data Symbols Across Multiple Decoding Layers", "All Optical Decoding Systems For Optical Encoded Data Symbols", "All Optical Cross Routing Using Decoding Systems For Optical Encoded Data Symbols" and "Compact Optical Delay Lines", respectively, all of which claim the benefit of U.S. Provisional Patent Application Serial No. 60/405,697 (now expired), filed August 22, 2002, entitled "Streaming Signal Control System for Digital Communication", ~~and of US Patent Applications Serial Nos. 10/404, and 10/404,140, both filed April 2, 2003 and entitled "Optical Threshold Devices and Methods"~~.

In addition this application is a ~~[[c]]Continuation-[[i]]In-[[p]]Part~~ of US Patent Application Serial No. 10/813,108 filed March 31, 2004 entitled "All Optical Logic Gates", now US Patent No. 6,990,281, ~~[[wich]]~~ which claims the benefit of U.S. Provisional Patent Application Serial No. 60/461,796 (now expired), filed April 11, 2003~~[[.]]~~, and of US Patent Applications Serial Nos. 10/404,077 (now US Patent No. 6,892,016) and 10/404,140 (now

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US Patent No. 6,795,626), both filed April 2, 2003 and entitled "Optical Threshold Devices and Methods".--

Please replace the paragraph shown below, beginning and ending on page 14:

-- The desired situation in which substantially all the energy of the low level input pulse may be reflected back into the input and there is substantially no signal at the output may be achieved by using symmetric couplers, such as coupler 5302. In contrast, devices such as the device described in the '979 patent mentioned above, are based on using an asymmetric coupler in the entrance to a loop mirror, wherein the asymmetric coupler is an essential element of the device. It should be appreciated that the above described feature of the present invention, whereby substantially all the energy of the low level input pulse is reflected back to the input, leaving substantially no signal at the output, cannot be achieved in devices based on using asymmetric coupler at the entrance to the loop mirror, such as that disclosed in the '979 patent. --

with the following:

-- The desired situation in which substantially all the energy of the low level input pulse may be reflected back into the input and there is substantially no signal at the output may be achieved by using symmetric couplers, such as coupler 5302. In contrast, some prior art devices ~~such as the device described in the '979 patent mentioned above,~~ are based on using an asymmetric coupler in the entrance to a loop mirror, wherein the asymmetric coupler is an essential element of the device. It should be appreciated that the above described feature of the present invention, whereby substantially all the energy of the low level input pulse is reflected back to the input, leaving substantially no signal at the output, cannot be achieved in

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devices based on using asymmetric coupler at the entrance to the loop mirror, such as that
~~disclosed in the '979 patent used in some prior art devices.~~ --

Please replace the paragraphs shown below, beginning and ending on page 18:

-- It is noted that a high ratio between pulses is also desired for devices such as that described in the '979 patent mentioned above; however, in contrast to the present invention, the allegedly high ratio achieved by the device described in the '979 patent results from the asymmetry of the input coupler of the device. To produce the desired ratio according to the device described in the '979 patent, the level of asymmetry of the asymmetric coupler must be very significant, preventing the device from blocking lower level input signals, thereby limiting and/or compromising the performance of such a device.

It is appreciated that, in contrast to prior art devices, such as the device described in the '979 patent, where performance must be compromised, at least, for either the low- level input signals or the high-level input signals, there is no such compromise in device 5300 according to the present invention. --

with the following:

-- It is noted that a high ratio between pulses is also desired for some prior art devices ~~such as that described in the '979 patent mentioned above;~~ however, in contrast to the present invention, the allegedly high ratio achieved by ~~the device described in the '979 patent~~ some prior art devices results from the asymmetry of the input coupler of the device. To produce the desired ratio according to ~~the device described in the '979 patent~~ these prior art devices, the level of asymmetry of the asymmetric coupler must be very significant, preventing the

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device from blocking lower level input signals, thereby limiting and/or compromising the performance of such a device.

It is appreciated that, in contrast to prior art devices, ~~such as the device described in the '979 patent,~~ where performance must be compromised, at least, for either the low- level input signals or the high-level input signals, there is no such compromise in device 5300 according to the present invention. --